

TYPICAL SECTIONAL VIEW
PIPELINE AND TANK

NOT TO SCALE

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SOURCE TO				
#1	#1-#2	#2-#3	#3-#4	
PIPE DIAMETER (MIN. 1 1/2")				
PIPE LENGTH				
PRESSURE REDUCER Y OR N				
TANK ELEVATION				
TANK CAPACITY				
TANK STA				

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES.
2. THE TRENCH SHALL BE FREE OF ROCKS AND OTHER SHARP EDGED MATERIALS.
3. THE PIPE SHALL BE PLACED IN A "SNAKE LIKE" POSITION IN THE TRENCH.
4. TURN ON THE WATER AND CHECK FOR LEAKS PRIOR TO BACKFILLING THE TRENCH.
5. ADD EXTRA PIPE FOR RISERS AND OVER FLOW.

BILL OF MATERIALS

QUANTITIES	UNIT	ITEM
	EACH	___ GAL TANK
	EACH	___ GAL TANK
	LIN. FEET	" ___ PIPE
	LIN. FEET	" ___ PIPE
	LIN. FEET	" ___ PIPE
	EACH	" ___ ELBOWS
	EACH	___ ELBOWS
	EACH	" ___ ELBOWS
	EACH	___ ELBOWS
	EACH	PRESSURE REDUCER
70 (PER TANK)	SQ. YDS.	NON WOVEN GEOTEXTILE
20 (PER TANK)	TONS	ROCK (DGA.#8.#57.#610)
1	EACH	PIPE CLEANER
1	EACH	GLUE
	EACH	CUT OFF VALVES

PLAN VIEW OF SYSTEM LAYOUT
(INCLUDE TANK AND LINE NUMBERS)

DATE

DESIGNED _____
DRAWN _____
CHECKED _____
APPROVED _____

PIPELINE AND TANK
(PRACTICE CODE 516 AND 614)

LANDOWNER: _____ COUNTY: _____



FILE NO.

DRAWING NO.

KY ENG 516E

SHEET OF

ENGINEERING JOB CLASS _____

REVISIONS		TITLE
DATE	APPROVED	
09/05	DLC	CE

GRAVITY PIPELINE AND TANK DESIGN-Continuous Flow

DESIGN PROCEDURE

1) Pipe and Tank

2) Number of Cows or Horses (hd)

3) Daily Consumption 1/ (g/hd/h)

4) Water Needs (g/h)

5) Tank Capacity (g)

6) Flow Rate in Pipeline 2/ (g/h)

Source to #1

#1 to #2

#2 to #3

#3 to #4

x

15

15

15

15

=

(If a flow rate required from a downstream line is higher than the line being designed then use the higher rate for all upstream lines)

Check the Replenishment Rate (Line 4 x 0.5) – Line 5 then divide by 3

7) Replenishment Rate (g/h)

For the Design Flow Rate in the Pipeline (Line 12) use the greater of Line 6 or Line 7

8) Elev. of the Water Source or the tank directly above

9) Elevation of the Tank

=

10) Total Available Head (ft.) (min. 4 ft., if > 115 ft.add pressure reducer)

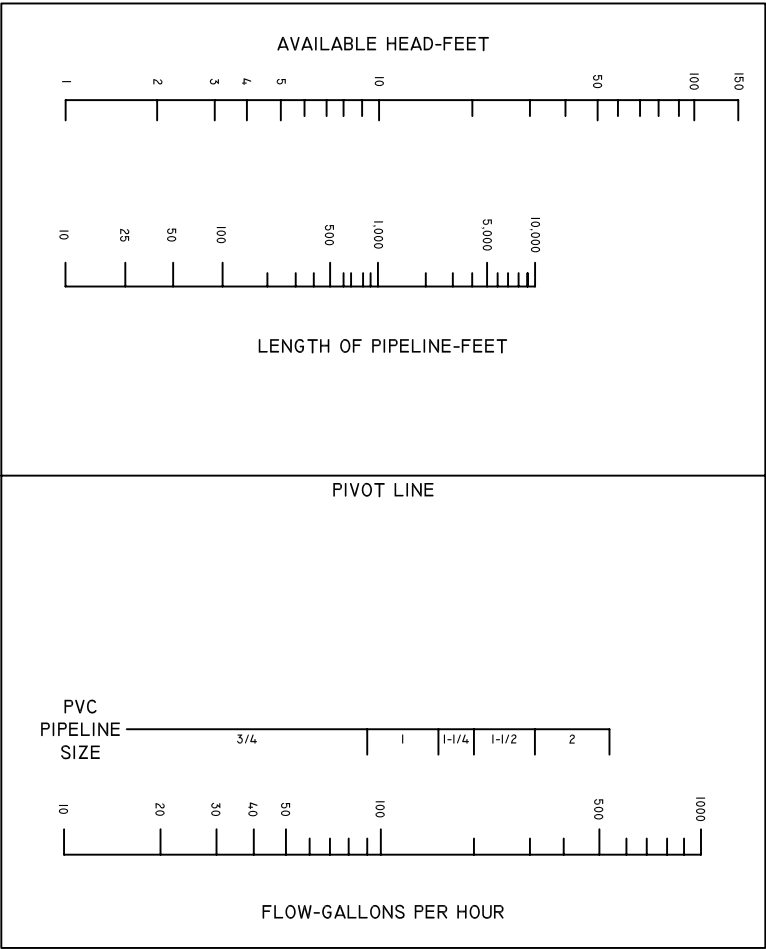
11) Length of Pipe From Tank being designed to the water source or tank above one being designed

12) Design Flow Rate in Pipeline (g/h)

13) Length of Pipe to Install (ft.)

14) PVC Pipe Diameter (in.)

PIPELINE DESIGN CHART FOR LIVESTOCK WATER FACILITIES
(plot lines on this chart, see KYFOTG IV for instructions)



1/ From Table 1 FOTG for beef, dairy, and horses use 15 gal/hd/hr.
2/ From Table 2 FOTG

CONSTRUCTION CHECK

	Source to #1	#1-#2	#2-#3	#3-#4
Length of Pipe (ft.)(measured)				
Diameter of Pipe (in.)				
Description of Pipe				
Min. Cover				
	#1	#2	#3	#4
Description of Tank (Gals.)				
Elev. of Tank				
Min. Projection of HUA				

To the best of my professional knowledge, judgment, and belief the installed practice meets NRCS standards.